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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,281	12/15/2003	Allan P. Henderson	P68425US1	1769

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WASHINGTON, DC 20004

EXAMINER

CHAPMAN, JEANETTE E

ART UNIT	PAPER NUMBER
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3635

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/734,281

Applicant(s)

HENDERSON, ALLAN P.

Examiner

Chapman E. Jeanette

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant elected group I, claims 1-14 without traverse. Claims 15-17 of group II have been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cody et al (6665990) in view of Mochida et al (5289626)

Cody discloses a pile anchor foundation for supporting a heavy load from a ground surface 20 comprising:

- A concrete foundation cap 14 having a bottom surface engaged with the ground 20
- An upper surface of the cap 14 supporting a heavy load such as a tower
- A plurality of ground anchors 16 depending from the cap
- The pile anchors are constructed from concrete extending into the underlying soil a substantial vertical depth below the vertical cap; see column 7, lines 5-15
- The foundation cap is cylindrical and the pile anchors are circumferentially spaced around the foundation cap
- Fastening members, anchor bolts 22, extending downwardly into the concrete cap and rigidly securing the tower to cap upper surface

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The pile anchors lack the tension members anchored thereto and extending upwardly through the cap with a post tensioning member at the upper end of the tension member and engaging an upper surface of the cap to pull the cap downwardly and compressing the underlying soil forming said ground surface with the cap bearing on the underlying soil. Mochida discloses a foundation K with a concrete pile. The pile anchors include the tension members 1 anchored thereto and extending upwardly through the cap K with a post tensioning member 5,6 at the upper end of the tension member and engaging an upper surface of the cap to pull the cap downwardly and compressing the underlying soil forming said ground surface with the cap bearing on the underlying soil. The tension members are elongated bolts 1 having a threaded upper end receiving a nut 2a-f and a lower end of the bolt 1 being anchored in the pile anchor. A length of each bolt is movable in relation to the pile anchor and the cap to enable stretching of the bolt when the nut on the upper end thereof is tightened downwardly to pull the cap downwardly. The pile anchors include a short length of compressible material 6 at an upper end and the cap compressing the compressible material when being pulled downwardly by the nut on the upper end of the tension bolts. In view of the above it would have been obvious to modify the base reference by including the tension members and the post tensioning members to withstand turning and uplifting forces exerted on the cap 14

Claim(s) 4 (is/are) rejected under 35 U.S.C. 103(a) as being unpatentable over cody et al (6665990) in view of Mochida et al (5289626) as applied to claim 1 and further in view of Chitis (4060994). Cody lacks the sleeve enclosing a substantial length of the bolts to prevent a portion of the bolt covered by the sleeve from bonding to the pile anchor. Chitis discloses a foundation with a pile anchor. The pile anchor or bolts include a sleeve 5 enclosing a substantial length of

the bolt to prevent a portion of the bolt covered by the sleeve from bonding the pile anchor. It would have been obvious to one of ordinary skill in the art to modify Cody to not only include the bolt but to include that covered by a sleeve thus enhancing and enabling the tensioning function.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over cody et al (6665990) in view of Mochida et al (5289626) as applied to claim 1 and further in view of Henderson et al (5586417). Cody lacks the periphery of the pile anchor and the cap defined by a corrugated metal pipe. Mochida teaches the pole anchor defined by a corrugated pipe 1b/10. Henderson et al. Henderson discloses the cap the pile anchors defined by a corrugated metal pipe 14. It would have been obvious to one of ordinary skill in the art to define the anchors and the cap, though separately distinguished by cody , with a corrugated metal pipe to further anchor the foundation into the soil.

Claims 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over cody et al (6665990) in view of Mochida et al (5289626) and further in view of Henderson et al (5586417).

Henderson also discloses an embedment ring 22 peripherally in the cap and being positioned adjacent the bottom surface and each of the anchor bolts 30 having a lower end rigidly affixed to the ring 22 to anchor and support the tower 12 to the cap. It would have been obvious to include the embedment ring.

Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over cody et al (6665990) in view of Mochida et al (5289626) and Henderson et al (5586417) and further in view of Chitis. The Chitis reference is being applied in the same manner as described above. Chitis also teaches an elongated pipe 4 filled with cement material with the tension bolt being

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centralized. Hensderson et al also teaches the corrugated pipe filled with cement material with the tension bolts 30 being centralized therein; the tension bolt has a lower end anchored in the cement material

Cody and Mochida teaches the tension bolt anchored in cement. In view of the above it would have been obvious to include the above structure to further anchor the structure into the ground. Chitis also discloses pile anchors including a void space 2 at the upper end of the cement material. The void space being filed with crushable material to enable the cap to be pulled downwardly to compress and consolidate underlying soil to desired strengths and to permit the pile anchors to move upward to develop skin friction resistance equal to the pile anchor bolt post tension.

Henserson also includes a grout trough 70 in the top surface making the top surface capable of receiving and set a supported tower flange in the grout by a template bottom ring. Henderson also includes blackout members 82 supporting the tower flange 80 at spaces in the trough while the grout is poured into the grout trough under the tower flange. Henderson also discloses the leveling nuts 42 on the fastening members engaged with the tower flange to support the tower flange to enable curing of the grout.

the leveling nuts can be lowered within the void spaces formed by removing the blackout members to enable the anchor bolts 20 on which the nuts are threaded to be elongated by post tensioning. It would have been further obvious to modify cody to include the void space with crushable material and the grout trough to further enhance the tensioning functions between the tower and the foundation.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chapman E. Jeanette whose telephone number is 571-272-6841. The examiner can normally be reached on Mon.-thursday, 8:30-6:00, every fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD CHILCOT can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


JEANETTE CHAPMAN
PRIMARY PATENT EXAMINER
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